

**GOVERNMENT OF INDIA
WATER RESOURCES, RIVER DEVELOPMENT AND GANAGA REJUVENATION
LOK SABHA**

UNSTARRED QUESTION NO:225

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Availability of Water

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Will the Minister of WATER RESOURCES, RIVER DEVELOPMENT AND GANAGA REJUVENATION be pleased to state:

- (a) whether India is lagging behind in regard to per capita global availability of water, if so, the details thereof and the reasons therefor; and
(b) whether the Government has formulated any concrete or institutional and integrated policy to deal with the said situation, if so, the details thereof?

Answer

THE MINISTER OF STATE FOR WATER RESOURCES, RIVER DEVELOPMENT AND GANGA REJUVENATION

(DR. SANJEEV KUMAR BALYAN)

(a) The average annual water availability of any region or country is largely dependent upon hydro-meteorological and geological factors and is generally constant. As per National Commission on Integrated Water Resources Development (NCIWRD) report, the total water availability of India received through precipitation is about 4000 Billion cubic meter (BCM) per annum. After evaporation, 1869 BCM water is available as natural runoff. Due to geological and other factors, the utilizable water availability is limited to 1123 BCM per annum. However, water available per person is dependent on population of the country and for India, water availability per capita is reducing progressively due to increase in population. The average annual per capita water availability in the years 2001 and 2011 was assessed as 1820 cubic meters and 1545 cubic meters respectively which may reduce further to 1341 and 1140 in year 2025 and 2050 respectively. India is home to more than 17% of world's human population and 17.5% of world's cattle population with only 2.4% of world surface area and 4% of fresh water resources of world.

Annual per-capita water availability of less than 1700 cubic meters is considered as water stressed condition, whereas annual per-capita water availability below 1000 cubic meters is considered as a water scarcity condition. Due to high temporal and spatial variation of precipitation, the water availability of many region of the country is much below the national average and can be considered as water stressed / water scarce.

(b) Since total water available (i.e. precipitation) cannot be changed, steps are required for conservation, efficient management and sustainability of water resources. The National Water Policy, 2012 formulated by this Ministry for unified national perspective on water resources management has made several recommendations in this regard. Some of these recommendations are as under:

- i) The availability of water resources and its use by various sectors in various basin and States in the country needs to be assessed scientifically and reviewed at periodic intervals. The trends in water availability due to various factors including climate change should be assessed and accounted for during water resources planning.
- ii) Availability of water for utilization needs to be augmented to meet increasing demands of water by harvesting of rainfall, desalination and avoidance of inadvertent evapo-transpiration etc.
- iii) The aquifers need to be mapped to know the quantum and quality of ground water resources (replenishable as well as non-replenishable) in the country.
- iv) Declining ground water levels in over-exploited areas need to be arrested by encouraging community based management of aquifers, introducing improved technologies and incentivizing efficient water use. In addition, where necessary, artificial recharging projects should be undertaken so that extraction is less than the recharge. This would allow the aquifers to provide base flows to the surface system and maintain ecology.
- v) Integrated watershed development activities with groundwater perspectives need to be taken in a comprehensive manner to increase soil moisture, reduce sediment yield and increase overall land and water productivity.

Further, this Ministry has formulated a National Perspective Plan (NPP) envisaging inter-basin Transfer of water to improve water security in the country. The implementation of NPP would give additional benefits of approximately 35 million hectare of additional irrigation potential and 34000 mega watts (MW) hydro power generation apart from the incidental benefits of flood moderation, navigation, drinking and industrial water supply, fisheries, salinity and pollution control etc.

Central Ground Water Board, under this Ministry has prepared a conceptual document entitled "Master Plan for Artificial Recharge to Ground Water in India" during the year 2013 envisaging construction of 1.11 crore Rainwater Harvesting and Artificial Recharge structures in the country to harness 85 BCM (Billion Cubic Meters) of water. The augmented ground water resources will enhance the availability of water for drinking, domestic, industrial and irrigation purposes. The Master Plan has been circulated to all State Governments for implementation.
